



SETTING THE OUTPUT CURRENT:

$I_{set} = I_{R21} + I_{R20} + I_{BIAS}$, where

$I_{R1} = V_{R21}/R_{21}$ and $I_{R20} = V_{R21} + V_{D1}/R_{20}$

To Minimize Tempco:
 LM134 tempco = +227 uV/C

1N457 tempco = -2.5mV/c

$I_{set} = I_{R21} + I_{R20}$
 $dI_{set}/dT = dI_{R21}/dT + dI_{R20}/dT$
 $= (227\mu V/C)/R_{21} + (227\mu V/C - 2.5mV/C)/R_{20}$
 $= 0$ (sover for tempco = 0)

$R_{20}/R_{21} = (2.5mV/C - 227\mu V/C)/227\mu V/C = 10$

Assume $V_{R21} = 67.7mV$ and $V_D = .6V$ and $R_{20}/R_{21} = 10$

$I_{set} = I_{21} + I_{20} + I_{bias}$
 $= V_R/R_{21} + V_R + V_D/R_{20}$
 $= 67.7mV/R_{21} + 67.7mV + 0.6V/10.0R_{21}$

$I_{set} = 0.134V/R_{21}$

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| Title | | |
| Blade Crash Current Source | | |
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